

REMARKS

This Response, filed in reply to the Office Action dated February 26, 2009, is believed to be fully responsive to each point of objection and rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 1, 2, 4-9 and 11-18 are all the claims pending in the application. Claims 1, 2 and 4-8 are withdrawn from consideration as being directed to non-elected inventions. Claims 9 and 11-18 are currently under examination, and are rejected. Consideration of the remarks herein is respectfully requested.

Withdrawn Rejections

1. Applicants thank the Examiner for withdrawing the rejection of Claim 10 under 35 U.S.C. §103(a), as set forth in the Office Action mailed August 7, 2008.
2. Applicants thank the Examiner for withdrawing the rejection of Claims 9 and 11-18 under 35 U.S.C. §103(a), as set forth in the Office Action mailed August 7, 2008.

Claims 9 and 11-18 are Patentable Under 35 U.S.C. § 103(a)

On page 2 of the Office Action, Claims 9 and 11-18 are rejected under 35 U.S.C. §103(a) as allegedly being obvious over Clausen *et al.* (U.S. Patent No. 5, 563,040), in view of Hirano *et al.* (*Journal of Wood Science*, 2000, 46:45-51) and Kawai *et al.* (U.S. Patent No. 3,677,899).

In making the rejection, the Examiner contends that Clausen *et al.* disclose an agent for diagnosing wood decay, comprising a monoclonal or polyclonal antibody obtained by sensitizing an animal with a protein obtained by culturing a wood destroying fungus, namely *Postia placenta*. The Examiner further contends that Clausen *et al.* disclose the fungi *Gloeophyllum*

trabeum, *Coniophora puteana* and *Serpula* sp., citing column 7, and a diagnostic kit having a polyester cloth device and a capture zone for the substrate. The Examiner, however, acknowledges that Clausen *et al.* do not disclose raising an antibody against a protein fraction having a molecular weight range of 1000-100,000 Daltons, and wherein the protein fraction is extracted from a species recited in Claim 9.

In an attempt to rectify the deficiencies of Clausen *et al.*, the Examiner cites to Hirano *et al.*, who allegedly disclose the extraction of a low molecular weight protein fraction from cultures of *Tyromyces palustris* (i.e. *Fomitopsis palustris*), citing the Abstract. The Examiner further contends that Hirano *et al.* disclose immunoblotting and ELISA using antibodies raised against this fraction.

However, the Examiner acknowledges that Hirano *et al.* and Clausen *et al.* are deficient in not disclosing cellobiose as a main carbon source. Thus, in an attempt to rectify the deficiencies of Hirano *et al.* and Clausen *et al.*, the Examiner cites to Kawai *et al.*, who allegedly disclose cellobiose as “the main carbon source for culturing wood decaying fungi,” such as *Fomitopsis* species, citing columns 1 and 2.

The Examiner appears to take the position that one of ordinary skill in the art would readily have employed the protein fraction of Hirano *et al.* to produce an antibody to be used in the method of Clausen *et al.*, motivation for which is asserted to be found in column 5 of Clausen *et al.*, wherein it is allegedly disclosed that antibodies specific for other components, or other groups of fungi, may be used. The Examiner further contends that one of ordinary skill in the art would readily have employed a liquid medium containing cellobiose as the main carbon source, which is alleged to be disclosed by Kawai *et al.*, to culture the fungi of Hirano *et al.* to produce the low molecular weight fraction.

Applicants respectfully disagree, and traverse the rejection in view of the following remarks.

Initially, Applicants note that to establish a *prima facie* case of obviousness, it is necessary to identify a reason that would have prompted a *person of ordinary skill in the relevant field* to combine the elements in the way the claimed new invention does. *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007). Further still, a *prima facie* case of obviousness cannot be maintained if one of ordinary skill in the art would not have possessed at least a reasonable expectation of success in making such a combination.

For the following reasons, Applicants respectfully submit that a *prima facie* case has not been established, and as such, the rejection should be withdrawn.

First, the sole motivation proffered by the Examiner for combining the elements of Hirano *et al.* and Clausen *et al.* with the liquid medium of Kawai *et al.* is that one of ordinary skill in the art would readily have used the “liquid medium taught by Kawai *et al.*” because “Kawai *et al.* [] teach cellobiose as the main carbon source for culturing wood decaying fungi.” However, Applicants respectfully disagree that Kawai *et al.* disclose as such, in view of the following.

Contrary to the Examiner’s position, Kawai *et al.* do not disclose cellobiose as “the main carbon source for culturing wood decaying fungi,” as stated in the rejection. In making such an assertion, the Examiner cites generically to columns 1 and 2. However, Applicants respectfully point out that in column 2, where Kawai *et al.* recite components of the liquid medium of the invention, Kawai *et al.* are entirely silent as to the use of cellobiose for *any* purpose, much less as the main carbon source. Specifically, in column 2, lines 18-32, Kawai *et al.* disclose that the liquid medium contains, “[a]s the carbon source, sucrose, glucose, maltose, lactose, starch,

dextrin, molasses, cellulose powder, absorbent cotton ... and as the nitrogen source ...” Clearly then, Kawai *et al.* neither teach nor even reasonably suggest to one of ordinary skill in the art to use cellobiose as a carbon source in a liquid medium for culturing wood decaying fungi, much less disclose it as “the main carbon source,” as the Examiner purports.

Further, Applicants note that the only disclosure in Kawai *et al.* pertaining to cellobiose is in the depiction of the enzymatic pathway bridging paragraphs 5 and 6 in column 1, wherein cellobiose is disclosed as a substrate for cellobiase β -glucosidase. However, at no point do Kawai *et al.* even suggest to one of ordinary skill in the art that it may be used as the main carbon source for culturing wood decaying fungi in a liquid medium. To assert such is simply a mischaracterization of the teachings of Kawai *et al.* In view of the above, Applicants respectfully submit that a *prima facie* case of obviousness has not been established at least because even if one of ordinary skill in the art were to employ the liquid medium of Kawai *et al.* in the method of Hirano *et al.*, they would not have possessed sufficient motivation to readily employ cellobiose as the main carbon source. To the contrary, in view of Kawai *et al.*, one of ordinary skill in the art would have employed one of the exemplary carbon sources disclosed therein. The Examiner’s assertion that one of ordinary skill in the art, having read Kawai *et al.*, would have used cellobiose as the main carbon source in the growth of wood-decaying fungi is not supported by the disclosure of Kawai *et al.*, and is firmly grounded in impermissible hindsight reconstruction, using data gleaned from Applicants’ disclosure.

Second, as a result of the mischaracterization of the teachings of Kawai *et al.*, discussed above, Applicants respectfully submit that the Examiner has failed to set forth a reason that would have prompted a person of ordinary skill in the relevant field to culture the fungi of Hirano *et al.* in a medium containing cellobiose as the main carbon source, as is required by law

to maintain the rejection. As noted above, the Examiner's reliance on Kawai *et al.* to establish that cellobiose was known as the main carbon source for culturing wood decaying fungi is inapt, and such would be recognized by one of ordinary skill in the art. However, this is the sole reason proffered by the Examiner as to why one of ordinary skill in the art would have combined Kawai *et al.* with Hirano *et al.* Accordingly, a *prima facie* case of obviousness has not been established also because the Examiner has failed to provide a reason that would have prompted *a person of ordinary skill in the relevant field* to combine the elements in the way the claimed new invention does. The reason proffered by the Examiner would not have prompted one of ordinary skill in the art to arrive at the presently claimed invention.

For the foregoing reasons, Applicants respectfully submit that a *prima facie* case of obviousness has not been established, and the rejection should be withdrawn.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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